

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A liquid crystal display comprising:
 - a display panel;
 - a back light irradiating through said display panel; and
 - an input terminal receiving an image discriminating signal indicating whether an image displayed on said display panel is a dynamic image or not in response to a ratio of an area of said display panel to an area where said dynamic image is displayed;
 - a back light control circuit controlling a brightness of said back light;
 - wherein said brightness of said back light is set to a first predetermined brightness when said image discriminating signal indicates that said display panel displays a dynamic image such that a ratio of an area of said display panel to an area of said dynamic image is smaller than a first threshold value and said brightness of said back light is set to a second predetermined brightness when said image discriminating signal indicates that said display panel displays a static image, wherein the first predetermined brightness is greater than the second predetermined brightness; and
 - a display controller which displays a part or the whole of a dynamic image in a single color for a predetermined period when said image discriminating signal indicates that said

display panel displays a dynamic image, and displays a static image without inserting a single color when said image discriminating signal indicates that said display panel displays a static image.

2. (original): The liquid crystal display as claimed in claim 1, wherein said back light control circuit controls said back light based on an image discriminating signal indicating whether an image to be displayed on said display panel is the dynamic image or the static image.

3. (currently amended): A liquid crystal display comprising:
a display panel;
a back light irradiating through said display panel;
an input terminal receiving an image discriminating signal indicating an active state when an image to be displayed on said display panel is a dynamic image and an inactive state when an image to be displayed on said display panel is a static image;

a back light control circuit controlling a brightness of said back light; and
a controller controlling said display panel in response to ~~an~~ said image discriminating signal; ~~indicating an active state when an image to be displayed on said display panel is a dynamic image and an inactive state when an image to be displayed on said display panel is a static image;~~

wherein said brightness of said back light is set to a first predetermined brightness when said image discriminating signal indicates the active state and said brightness of said back light is

set to a second predetermined brightness when said image discriminating signal indicates the inactive state, wherein the first predetermined brightness is greater than the second predetermined brightness and wherein at least a part of said display panel displays a reset image only when said image discriminating signal indicates the active state; and

wherein said controller further displays a part or the whole of a dynamic image in a single color for a predetermined period when said image discriminating signal indicates that said display panel displays a dynamic image and displays a static image without inserting a single color when said image discriminating signal indicates that said display panel displays a static image.

4. (original): The liquid crystal display as claimed in claim 3, wherein said display panel comprises a plurality of cells, and wherein at least a part of said plurality of cells displays a single color as said reset image.

5. (original): The liquid crystal display as claimed in claim 3, wherein said display panel comprises:

a scanning line;
a signal line arranged substantially perpendicular to said scanning line; and
a cell arranged at an intersection of said scanning line and said signal line, wherein at least a part of said cell displays a single color as said reset image.

6. (original): The liquid crystal display as claimed in claim 5, wherein said controller activates a first scanning line at a first scanning period and provides an image data to a first signal line, and said controller activates a second scanning line at a second scanning period and provides reset data to said first signal line, and wherein said first scanning period and said second scanning period are included in a basic period for scanning said scanning line.

7. (original): The liquid crystal display as claimed in claim 6, further comprises at least one of a third scanning line arranged between said first scanning line and said second scanning line.

8. (cancelled).

9. (currently amended): ~~The liquid crystal display as claimed in claim 8,~~ A liquid crystal display comprising:

a display panel;

a back light irradiating through said display panel;

an input terminal receiving said image discriminating signal and providing said image discriminating signal to said controller and said back light control circuit;

a back light control circuit controlling a brightness of said back light; and

a controller controlling said display panel in response to an image discriminating signal indicating an active state when an image to be displayed on said display panel is a dynamic

image and an inactive state when an image to be displayed on said display panel is a static image, wherein said brightness of said back light is set to a first predetermined brightness when said image discriminating signal indicates the active state and said brightness of said back light is set to a second predetermined brightness when said image discriminating signal indicates the inactive state, wherein the first predetermined brightness is greater than the second predetermined brightness and wherein at least a part of said display panel displays a reset image only when said image discriminating signal indicates the active state;

wherein said image discriminating signal indicates said active state when a ratio of an area of said display panel to an area of said dynamic image is smaller than a first threshold value.

10. (cancelled).

11. (original): The liquid crystal display as claimed in claim 9, further comprising:
a computer comprising:

a memory storing said first threshold value; and

a detector and comparator detecting said ratio of said area of said display panel to said area of said dynamic image, comparing said ratio to said first threshold value, and providing said image discriminating signal into said controller and said back light control circuit, wherein said image discriminating signal indicates said active state when said ratio is smaller than said first threshold value.

12. (original): The liquid crystal display as claimed in claim 11, wherein said image discriminating signal indicates said inactive state when said ratio is smaller than said first threshold value.

13. (previously presented): The liquid crystal display as claimed in claim 83, further comprising an image discriminating unit receiving image data and providing said image discriminating data indicating said active state into said back light control circuit when said image data comprises dynamic image data, wherein said dynamic image data is data related to said dynamic image.

14. (original): The liquid crystal display as claimed in claim 13, wherein said image discriminating unit provides said image discriminating data indicating said inactive state into back light control circuit when said image data comprises static image data, and wherein said static image data is data related to said static image.

15. (currently amended): ~~The liquid crystal display as claimed in claim 14,~~A liquid crystal display comprising:
a display panel;
a back light irradiating through said display panel;
an input terminal receiving said image discriminating signal and providing said image discriminating signal to said controller and said back light control circuit;

a back light control circuit controlling a brightness of said back light; and
a controller controlling said display panel in response to an image discriminating signal
indicating an active state when an image to be displayed on said display panel is a dynamic
image and an inactive state when an image to be displayed on said display panel is a static
image, wherein said brightness of said back light is set to a first predetermined brightness when
said image discriminating signal indicates the active state and said brightness of said back light is
set to a second predetermined brightness when said image discriminating signal indicates the
inactive state, wherein the first predetermined brightness is greater than the second
predetermined brightness and wherein at least a part of said display panel displays a reset image
only when said image discriminating signal indicates the active state;

an image discriminating unit receiving image data and providing said image
discriminating data indicating said active state into said back light control circuit when said
image data comprises dynamic image data, wherein said dynamic image data is data related to
said dynamic image; wherein said image discriminating unit provides said image discriminating
data indicating said inactive state into back light control circuit when said image data comprises
static image data, and wherein said static image data is data related to said static image; and

wherein said image data comprises a first part of said image data corresponding to a first frame and a second part of said image data corresponding to a second frame, and

wherein said image discriminating unit comprises a memory storing said first part of said image data at said first frame, and a comparator comparing said first part of said image data with said second part of said image data at said second frame, and detecting that said image data

comprises said dynamic image data when said first part of said image data is different from said second part of said image data.

16. (original): The liquid crystal display as claimed in claim 15, wherein said comparator detects that said image data comprises said static image data when said first part of said image data is the same as said second part of said image data.

17. (original): The liquid crystal display as claimed in claim 14,
wherein said image data comprises a first part of said image data corresponding to a first frame and a second part of said image data corresponding to a second frame, and

wherein said image discriminating unit divides said first part of said image data into a first plurality of partial data corresponding to a plurality of detecting blocks of said display panel and said second part of said image data into a second plurality of partial data corresponding to a plurality of detecting blocks of said display panel.

18. (previously presented): The liquid crystal display as claimed in claim 17, wherein said image discriminating unit comprises:

a memory storing said first part of said image data at said first frame, and
a comparator detecting said first plurality of partial data at said first frame which is different from said second plurality of said second data at said second frame, providing a number of detected said first plurality of partial data at said first frame, and providing said image

discriminating signal indicating said active state when said number is larger than a second threshold value.

19. (previously presented): The liquid crystal display as claimed in claim 14, wherein said image data comprises a first part of said image data corresponding to a first frame and a second part of said image data corresponding to a second frame, and

wherein said image discriminating unit defines a first plurality of partial data corresponding to a plurality of detecting points of said display panel in said first part of said image data and a second plurality of partial data corresponding to a plurality of detecting points of said display panel in said second part of said image data.

20. (previously presented): The liquid crystal display as claimed in claim 19, wherein said image discriminating unit comprises:

a memory storing said first part of said image data at said first frame, and
a comparator detecting said first plurality of partial data at said first frame which is different from said second plurality of said second data at second frame, providing a number of detected said first plurality of partial data at said first frame, and providing said image discriminating signal indicating said active state when said number is larger than a third threshold value.

21. (previously presented): A liquid crystal display device comprising:

a liquid crystal display panel including a plurality of scanning lines, a plurality of signal lines intersecting said scanning lines, and a plurality of driving elements, each disposed at an associated one of intersections of said scanning lines and said signal lines;

a backlight unit provided to illuminate said liquid crystal display panel; and

a control/drive circuit controlling and driving said liquid crystal display panel to enable a display of a dynamic image and a static image, wherein said control/drive circuit is adapted, when said dynamic image is displayed, to perform a dynamic display mode in which each of the scanning lines contained in at least a dynamic image displaying portion of said liquid crystal display panel is activated two times during one frame period and each of said signal lines is supplied with image data during one of said two times and with a signal unrelated to the image data during the other of said two times.

22. (previously presented): The device as claimed in claim 21, wherein said backlight unit is controlled to illuminate said liquid crystal display panel upon displaying said dynamic image more brightly than upon displaying said static image.

23. (previously presented): The device as claimed in claim 21, wherein, between first and second activations of one of the scanning lines, at least another one of the scanning lines is activated.

24. (previously presented): The device as claimed in claim 21, wherein said control/drive circuit is adapted, when said static image is displayed, to perform a static display mode in which each of the scanning lines contained in at least a static image displaying portion of said liquid crystal display panel is activated once during one frame period and each of said signal lines is supplied with image data during the activation of the scanning line.

25. (previously presented): The device as claimed in claim 24, wherein said control/drive circuit displays said static image on a first area of said liquid crystal display panel and said dynamic image on a second area of said liquid crystal display panel, wherein said control/drive circuit performs said static display mode when a ratio of said first area to said second area is greater than a predetermined value irrespective of whether said dynamic image is required to be displayed.

26. (new): The display as claimed in claim 1, wherein said single color is black.

27. (new): The display as claimed in claim 1, further comprising:

a memory including an on-screen area including image information for display including a memory area for storing predetermined key color information for an area for displaying a dynamic image and an off-screen area including the image information of the dynamic image;

an overlay selection circuit that reads image information for display from the on-screen area, reads the image information of the dynamic image from the off-screen area, outputs image

information corresponding to the image information for display to the liquid crystal display in case the image information for display is not the key color information and outputs the image information of the dynamic image to be liquid crystal display in case the image information for display is the key color information for displaying an image on the liquid crystal display;

an area threshold memory for discriminating dynamic image and a static image that stores the area ratio to discriminate whether an image displayed on the liquid crystal display panel is a dynamic image or not; and

a liquid crystal key color area detecting/comparing circuit that detects the ratio of the image information for display which is a display area of the liquid crystal display panel in the on-screen area and an area in which the key color information is stored, compares the ratio and the area ratio stored in the area threshold memory for discriminating a dynamic image and a static image and outputs the image discriminating signal to the liquid crystal display.